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ABSTRACT

A study was conducted to determine if changes in a student's writing and speaking skills over the period of a semester could be measured reliably and to measure what changes, if any, occur in these skills over this period. A pretest-posttest design employing the speech and writing portions of ACT's College Outcome Measures Project was used to gather data. Subjects were 88 college students in six sections of a basic rhetoric course. Analysis of test results indicated that these changes could indeed be measured. Specifically, the greatest gains in skills occurred for the relatively weakest subgroups of subjects in both writing and speaking. On the other hand, except in one case, higher level subgroups did not improve their skills. Most important, however, nearly all of the students reached a standard of proficiency acceptable for college level writing and speaking. (JL)

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Assessing Growth in a Communication Skills Program

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This report describes research conducted to measure changes in students' writing and speaking performance over a semester of instruction. The American College Testing Program's speaking and writing assessments were administered to students in the Rhetoric Program at the University of Iowa at the beginning of the semester and again at the end of the course. The students demonstrated gains on the rhetorical components of both assessments. Those gains are identified and attributed to particular rhetorical components of the speaking and writing processes. A more detailed version of this study will appear in the April 1983 issue of COMMUNICATION EDUCATION.

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ASSSESSING GROWTH IN A COMMUNICATION SKILLS PROGRAM Trank/Steele

The basic speech communication course is alive and well. Enrollments are increasing more rapidly than overall departmental or institutional growth. The last half of the 1970's also produced a clear shift back toward a performance orientation within the basic course. Public speaking textbooks have claimed the greatest share of the basic course market and most students in these classes give from four to ten speeches during the semester.[1] Why the dramatic growth in enrollment? Why the reviewed emphasis on public speaking? Have we suddenly articulated our goals and objectives so clearly that all academic departments have suddenly discovered our true value? What do such courses teach our students?

It is relatively obvious to most of us that a course in public speaking ought to make a person a better speaker. That is most certainly the view of colleagues in other academic disciplines even if it is not always as warmly endorsed by those more directly involved. It is, however, a reasonable expected outcome of instruction regardless of your philosophical or pedagogical orientation. We are likely to find even more agreement on the proposition that college graduates need these communication skills (which we profess to teach in the basic course) to succeed in their chosen profession. We certainly have the data, from our discipline and others as well, to support such a proposition.[2] The logic followed by many who support the basic communication course certainly rests on that assumption:

The ability to communicate is a valuable asset in our society.

The basic course improves an individual's ability to communicate.

Therefore, the basic course is valuable.

In addition to whatever syllogistic shortcomings this argument contains, there are more serious deficiencies which preclude universal acceptance. Does the basic course, in fact, improve an individual's ability to communicate? Are students better speakers as a result of instruction in speech? Are they better writers as a result of instruction in composition?

Before attempting to answer these questions we need to acknowledge one other factor which has become increasingly important to this discussion in the past few years. The public has become more vocal in their criticism of the students graduated by our public schools and colleges. The headlines "Johnny can't read," "Johnny can't write," and "Johnny can't speak" are familiar to all of us. The seemingly most frequent response to such criticism, whether initiated externally or internally, is to increase either the length of time students must spend in basic communication courses or the amount of actual student communication performances required within the basic course.[3] While it is reasonable to assume that supervised instruction and practice in writing and speaking will increase an individual's communication competence, the paucity of research exploring that relationship is deplorable. Although scholars have painstakingly investigated dozens of variables relevant to the basic communication course, little has been done to determine the effect of the basic course on growth in communication competence.

Not a single study has been published which measures the amount of growth in both writing and speaking competence over the period of a semester of communication instruction on a nationally normed instrument.[4]

The lack of such studies, although surprising given the concern expressed previously and the relative importance and popularity of educational accountability and competency-based education, may be partially a result of the conspicuous lack of a suitable instrument for such evaluation. Until recently, no nationally used instrument has been available to assess growth in communication skill.

Scholars interested in the assessment of writing have made more obvious progress than those with a similar interest in speech. Most of that effort has, thus far, been directed toward secondary educational institutions and students. As of 1979, a total of eighteen states had statewide writing assessments in progress and an additional five reported similar assessments in the planning stages.[5] While several states are in the process of delineating specific oral communication competencies[6] and the Speech Communication Association has distributed a list of oral communication competencies necessary for functionally competent adults to all states,[7] the status of speech assessment remains well behind that of writing assessment.[8]

The assessment of writing skill at the post-secondary level has also become a major focus for research in recent years. The Educational Testing Service developed a twenty-minute assessment of writing competence using actual student writing samples which is now offered as an optional component of the Scholastic Aptitude Test.[9] The American College Testing Program, as part of its new College Outcome Measures Project (COMP), has also developed an assessment of writing competence using student writing samples. COMP, in addition, has a component designed to assess speaking competence using student speech samples.[10] The COMP assessments of speaking

and writing are defined as the ability to communicate about social institutions, science and technology, and the arts. Written and audiotaped stimuli are used as a context for role-playing tasks in which participants write letters to friends, legislators and administrators or speak to friends, informal and formal meetings. Thus three writing samples and three speaking samples are obtained in a variety of realistic contexts. In COMP materials, equal emphasis in both speaking and writing assessment is given to rhetorical concerns (discourse or organization), psychological concerns (making contact with and attending to the perspective of the audience), and practical concerns (such as using vivid language and illustrations, to dramatize and create an effect). Little emphasis is given to formal errors such as mispronounced or misspelled words and pausing or punctuation, unless they noticeably detract from or obscure the message. These criteria are qualitatively scaled to allow a norm-free judgment of the overall effect of a speech or essay.

Role playing tasks were judged to be especially appropriate for the COMP speaking and writing assignments. Adults are often called upon to adopt roles that they have not chosen and with which they may not personally find themselves entirely in agreement. However, one bit of evidence of effective functions is the ability to accept such a role and perform responsibly in it. The overriding guidelines in rating the written and oral responses is the degree to which each response represents an effective communication for an adult engaged in the various roles represented by the six tasks.

The purpose of this research was to test the writing and speaking performance of students at the beginning of the academic year and again

after the completion of one semester of Rhetoric instruction. In order to provide a focus for the study and to facilitate diagnosis of the data generated, this study explored the following questions:

1. Can changes in a student's writing and speaking skills over the period of a semester be measured reliably?
2. What changes, if any, occur in a student's writing and speaking skills as a result of one semester of instruction in communication skills?

Method

Besides a high content validity for the COMP Speaking and Writing Assessments, ACT had conducted a series of validity studies of the relationship of these assessments to a variety of adult roles outside of the classroom. To date, performance on these instruments has been found to be clearly related to supervisor ratings of persons in teaching, nursing, banking, business management and criminal justice management settings. In an additional study using a variety of measures, these communication skills showed some of the highest relationships with a sociological rating of effectiveness of job function for Black, Hispanic, and white adults in one metropolitan area. Thus these instruments already were supported by evidence that the skills as measured were important to effective functioning in adult roles.[11]

We selected the speech and writing portions of ACT's College Outcome Measures Project because they not only appeared directly related to the outcomes intended in the Rhetoric program, but they are the only tests with substantial norms for college students which include actual performance

testing of both writing and speaking abilities. Both assessments allowed us to simulate, within the controlled conditions of the tests, commonly encountered speaking and writing situations. Such direct assessment approaches are generally acknowledged to be the most effective way to assess writing skill when resources and expertise are available.[12] Direct assessment procedures are obviously also the most effective way to assess actual speaking skill. These tests also allowed us to focus on specific questions which would provide insights into the effectiveness of basic communication skills courses.

A pre/post test design was used to determine the amount of change in students' writing and speaking skills over the period of one semester. Six sections of Rhetoric 10:1 at the University of Iowa were selected to participate in the study. Each met for four 50-minute sessions on the same days of the week during the Fall 1980 semester. Three veteran instructors taught two sections each following the general course guidelines in our course manual. The writing portion of the test was administered over a period of two class sessions during the second week of the semester. The students presented their speeches at the University Language Lab at the end of that second week. Three sections used Form III and three used Form IV of the COMP/ACT Speaking and Writing Assessment. The students were given the alternative forms as a posttest during the 15th week of the semester.

Of the 120 students initially enrolled in these six sections, 88 actually completed both pre and post assessments of both speaking and writing. Fourteen students were dropped from the study because of technical problems with either the pre or post audiotaped responses.

Eighteen students were dropped from the study because they failed to complete one or more portions of the pre and post assessments. The assumption of random assignment to section via computer registration was generally supported. Thus, the sample can be assumed to be representative of students enrolled in Rhetoric 10:1 at this institution.

Rating of Results

Pretests and posttests were coded by number and organized so that pre and posttests were sequenced alternatively. Raters did not know that the study involved pre and posttesting, nor did they know the number of instructors involved. After all ratings were completed, a random sample of 24 students was rerated by trained ACT raters for each form of both Speaking and Writing scales. Table 1 displays interrater agreement. Mean levels of rating were quite close in all cases, differing slightly more for writing than for speaking.

The correlation coefficients for speaking of .91 for Form 3 and .81 for Form 4 indicate a very high level of agreement. For writing, the coefficients of .82 for Form 3 and .72 for Form 4 indicate acceptable levels of agreement. (A correlation coefficient above .70 is judged acceptable for program evaluation comparing groups of students. For decisions affecting individual students, a higher standard of .80 would apply.) Equivalent forms studies conducted by ACT have confirmed that the forms are indeed parallel. Thus it is appropriate to examine results for both forms combined. For the combined group, the means were almost identical for both speaking and writing. The correlation coefficients of .87 for Speaking and .75 for Writing confirm reliability of rating.

Analysis and Interpretation of Results

The analysis of results will be treated in three parts. The first part presents raw mean scores by section, pretest group and total group. The second part examines results based on entry level of students in speaking and writing. The third part is based on a criterion-referenced approach and examineschanges based on a minimum standard of performance.

Part 1: Mean Score Analysis: Table 2 displays pre and posttest scores for the total sample of 88 students. (The SPSS Breakdown procedure was used to obtain one-way analysis of variance to test for the significance of differences in means.) A slight gain was observed for writing and somewhat larger gain for speaking, resulting in a total gain of 2.68. This gain represents a difference in means that is statistically significant at the .04 level. The gain in Total Speaking was significant at the .03 level. The difference in Total Writing means was not statistically significant.

Examination of the components of the Writing and Speaking scores indicates that gains in Writing were observed on Audience. No gains were evidenced on Organization or Language for the total sample. Gains at or approaching the .05 level of significance were indicated on all three components of Speaking. Thus, while instruction emphasized both writing and speaking skills, most of the gain for the total sample in this study appears due to increases in speaking proficiency.

Part 2: Analysis by Entering Skill Level: In longitudinal studies of growth, a number of factors influence whether gains are observed. Some of these factors are due to differences in students (e.g., entering skill

level, motivation to improve, major). Some factors are statistical in nature such as those involving regression toward the mean or sensitivity of the scales at various levels. This part of the analysis explores differences in gains for students in the top and bottom fourth of the sample in entering levels of proficiency in Writing and Speaking.

Those students who scored below 18 or above 21 on the Pretest Writing Assessment were defined as the lower and upper writing subgroups respectively, with the remaining students forming the mid group. Those students who scored below 15 or above 21 on the Pretest Speaking Assessment became the lower and upper speaking subgroups. Table 3 summarizes mean pre/posttest scores for these three entry levels of proficiency on writing and speaking. Clearly, greatest gains occured for students at the lowest entry level in Writing and Speaking. The most pronounced gain occured on the relevant test, e.g., a writing gain of over 3 points for the lower writing subgroup and a speaking gain of over 5 points for the lower speaking subgroup. Slight gains in Speaking occured for the middle entry level groups. The upper entry level groups either maintained essentially the same mean or showed a mean loss in all but one group.

This apparent loss or lack of gain in the upper entry level group may be due to a regression effect, a statistical problem in measuring growth. The correlation of gain scores with pretest scores for writing of -.50 and for speaking of -.54 reflects the general result that the higher the gain the lower the pretest score. A regression effect could, therefore, have somewhat exaggerated the gains of students in the lowest quartile while it underestimated the gain for students in the upper quartile.

However, this relationship explains only about 25% of the variance. Gains did occur for some individuals across the whole range of entering level. While a regression effect may have been present, several other hypotheses could easily explain this result:

a) Instructors could have concentrated their efforts on students with the weakest skills. Given the purpose of the course, instruction could well have favored those most in need of help.

b) In writing, 47% of the entering freshmen were at or above the mean for college seniors in a reference group of 847 seniors at 12 institutions in level of proficiency, while in speaking 30% were at or above the means for seniors. The high entry level, especially for writing, may have resulted in students being much less motivated to improve in this basic required course.

c) It may be that it is much more difficult to improve writing and speaking skills at the middle and upper ranges of performance than at lower levels. Given the high entering levels of students in this study, changes in the whole range may have been unlikely and unrealistic as an expectation. Thus, one or more than one of these possible factors may have influenced the pattern of results obtained in this study.

Part 3: Number of Students Reaching a Selected Standard of Proficiency: Another approach to describing growth in Communication Skills is to determine the number of students who succeed in reaching a minimum standard of proficiency. Such a standard can be criterion-referenced to the rating

scales used in speaking and writing. On the five point A-E scale of proficiency, an average rating of C for the three speaking samples or writing samples might be an appropriate criterion. A score of 18 would be the average rating of C on the ACT rating scale used in this study. A score of 15 would represent a C- on the rating scale. The mean score for this sample was at the standard for speaking (18.13) and above it for writing (19.55).

Table 4 displays the number of students who were at or above the standard on the pretest and remained above this standard on the posttest. It also shows the number of students who achieved this standard by the posttest and those who appeared to drop below it from pre to posttest.

Based on a Writing Criterion score of 18, 64 of the 88 students (73%) were at or above this proficiency level on the pretest. Of the 24 students entering below this level, 17 or two-thirds of them reached the criterion on the posttest. Thus, by the end of the course, only 7 of the 88 students were below the standard.

Using the same criterion score of 18 for speaking, 44 of the 88 students were at or above this proficiency level on the pretest. Of the 44 students entering below this level, 22 or half of them reached the criterion on the posttest. Thus, by the end of the course, 66 of the 88 students were above the standard. Students in this sample were comparatively weak in speaking skills on entry. If the speaking criterion was set at 15 as the bottom example in Table 4 illustrates, about the same number would have been at or above this level on entry as were at the criterion of 18 in writing on entry. Of the 23 students entering below this level, 14 or about two-thirds of them reached the criterion

on the posttest. Thus, by the end of the course, only 9 of the 88 students were below this standard.

Conclusions and Implications

The two central questions in this study were both answered. Can changes in a student's writing and speaking skills over the period of a semester be measured reliably and validly? The results of this study demonstrate that such measurements can indeed be made. The validity of American College Testing Program's College Outcome Measures Project Speaking and Writing Assessments had been previously demonstrated and was confirmed by this study. The correlation coefficients of .87 for speaking and .75 for writing confirmed adequate reliability of rating for this study. The instruments clearly documented changes in student's writing and speaking skills over the period of a semester. The gain in speaking for the total group of students was significant at the .03 level while the slight gain in writing was not statistically significant. The greatest gains occurred for students at the lowest entry level in writing and speaking. The lower writing subgroup gained over three points on the writing test and the lower speech subgroup gained over five points on the speech test. Slight gains in speaking occurred for the middle entry level subgroups. The upper entry level subgroups either maintained essentially the same mean or showed a mean loss in all but one case.

The second question was also answered. What changes, if any, occur in a student's writing and speaking skills over the period of a semester? Definite gains in writing were demonstrated on the Audience component of the writing test. Although some subgroups showed moderate gains, no

gains were evidenced on the Organization or Language components of writing for the total sample. Gains at or approaching the .05 level of significance were indicated on all three components of speaking. Examining the results of this analysis brings the significance of this question into focus. While instruction in Rhetoric emphasized both writing and speaking skills, most of the gain for the total sample in this study appears due to increases in speaking proficiency. Without access to a usable control group one must be somewhat guarded in overgeneralizing from this and other apparent results of this study. Students at the University of Iowa are required to take Rhetoric during their first semester on campus and before they are permitted to enroll in most of their core course requirements. These requirements restricted our control group to those students who, for some valid reason or exemption, were unable to enroll in Rhetoric during the Fall semester but did register for it in the Spring semester. The resulting percentage of transfer, minority, and non-native English speaking students was much higher in our control group than in our test groups. Although reporting the control group scores and comparing them with the posttest scores for our test groups is tempting, the great differences in these scores are obviously due to many factors, some of which are not relevant to this study.

It is clear from the data, however, that gains occurred over the period of a semester. Those gains are identifiable and attributable to particular rhetorical components of the speaking and writing processes. The major gains occurred for the relatively lowest entry level subgroups in both writing and speaking. It may be that these groups profited most from the relevant instruction or that the instruction was most appropriate

for their level of competence. On the other hand, it is discouraging to note that all except one of the upper level entry subgroups failed to demonstrate gains in their level of performance. Most importantly, from one perspective, nearly all of the students in this study reached a standard of proficiency acceptable for college level writing and speaking. Eighty-one of the 88 students in the sample achieved this standard for writing and 66 of the students in the sample achieved this standard for speaking. Lowering the criterion - referenced standard for speaking to a C - would leave only nine of the students below the minimum standard for speaking at the end of the semester.

Although the results of this study did directly respond to the research questions, they left many unanswered and created more to be explored. Are speaking skills more amenable to instruction than writing skills? There is no clear indication or justification for the small gains in writing compared to those in speaking. The fact that students showed gains in all three components of the speaking test but showed gains only on the Audience component of the writing test is puzzling given the commonality of the tests and the instructional program combining speech and writing instruction. This study did little to illuminate the similarities in writing and speaking in instruction or in performance.

Given these results and implications, additional research is certainly warranted. The nature of the educational institution as well as ethical constraints prohibited the utilization of a meaningful control group in this study. The inclusion of data from the small control group available for this study would exaggerate these results well beyond their actual

significance. Since maturity, the college experience, other classes, and other factors may well contribute to growth in speaking and writing competence, there is a definite need to replicate this study with a meaningful control group. One semester of writing and speech instruction does appear to contribute to a measurable development of those respective skills but, without relevant controls, it is difficult to offer definitive proof for the argument.

Although the Rhetoric Program at the University of Iowa integrates instruction in writing and speech, it has obvious similarities to other, more traditional programs. Like most other institutions, our basic course has a strong performance orientation. Our students generally write ten essays and deliver six speeches during the semester. The course is required of all students and is typically completed during the Freshman year. Since writing and speaking are integrated in our program, however, additional questions for similar studies arise. Would students gain more on the writing test if they were taking a course in composition? Would students gain more on the speaking test if they were taking a course in public speaking? The effects of either writing or speech instruction compared to the integration or combination of the two are not known.

There is apparent need for long term testing of writing and speaking skills. Researchers need to monitor the communication skills of students over a period of several semesters or years to determine the degree of growth, retention, or loss on the various components related to writing and speaking competence.

This study and the instruments utilized certainly ought to be valuable to those scholars concerned with instructional research in writing or

speaking. These instruments and the national norms which exist for them will allow researchers to test for the effect of instructor, course, and classroom interaction variables on the outcomes of writing and speech instruction. Such research, to date, has been too dependent upon student attitude measures and student and instructor perceived outcomes of instruction. This study demonstrates that, when relevant variables are identified, relationships among those variables and actual student growth in communication competence can be reliably and validly assessed.[13]

Table 1
Speaking Assessment
Interrater Agreement for Forms 3 and 4

	Form 3			Form 4	
	ACT Rater	External Rater		ACT Rater	External Rater
mean	18.25	18.29	mean	19.54	19.79
sd	7.74	7.14	sd	5.33	5.75
r	.91		r	.81	
N	24		N	24	

Writing Assessment
Interrater Agreement for Forms 3 and 4

	Form 3			Form 4	
	ACT Rater	External Rater		ACT Rater	External Rater
mean	18.88	18.17	mean	17.96	18.71
sd	4.12	3.19	sd	3.18	3.13
r	.82		r	.72	
N	24		N	24	

Results for Both Forms Combined

	Speaking			Writing	
	ACT Rater	External Rater		ACT Rater	External Rater
mean	18.90	19.04	mean	18.44	18.42
sd	6.60	6.46	sd	3.13	3.67
r	.87		r	.75	
N	48		N	48	

Table 2

Pre and Posttest Mean Scores for Total Group (N = 88)

Scale	Pre test Mean	Post test Mean	Sig.
Total Score	37.67	40.05	.038
Total Writing	19.55	20.17	---
Total Speaking	18.13	19.88	.034
Writing Audience	6.98	7.60	.017
Organization	5.84	5.84	---
Language	6.73	6.73	---
Speaking Audience	6.39	7.01	.043
Discourse	5.96	6.54	.062
Delivery	5.79	6.33	.051

Table 3

Summary of Pre/Posttest Mean Scores for Three Entry Levels of Performance in Writing and Speaking

	Lower Quartile			Middle Half			Upper Quartile		
	Pre	Post	gain	Pre	Post	gain	Pre	Post	gain (loss)
Writing Entry Level	15.38	18.59	+3.21	19.15	19.65	+.50	24.38	22.63	(-1.75)
Speaking Entry Level	11.65	16.69	+5.04	17.76	19.77	+2.01	25.59	23.41	(-2.18)
Combined Communication Mean Scores									
Writing Entry Level	31.83	37.21	+5.38	36.63	38.59	+1.96	45.25	45.38	+.13
Speaking Entry Level	30.09	36.39	+6.30	37.28	39.49	+2.21	46.36	44.95	(-1.41)

Table 4

Placement Below or Above Criterion
on Pre and Post Test in Writing and Speaking

Writing Criterion = 18 (average rating of C on the rating scale)

	Form 3 Post Test			Form 4 Post Test			Total Sample Post Test		
	Below Standard	18 or above		Below Standard	18 or above		Below Standard	18 or above	
Pretest below standard	3	7	10	4	10	14	7	17	24
18 or above	7	27	34	3	27	30	10	54	64
	10	34	44	7	37	44	17	71	88

Speaking Criterion = 18 (average rating of C on the rating scale)

	Form 3 Post Test			Form 4 Post Test			Total Sample Post Test		
	Below Standard	18 or above		Below Standard	18 or above		Below Standard	18 or above	
Pretest below standard	14	7	21	8	15	23	22	22	44
18 or above	4	19	23	3	18	21	7	37	44
	18	26	44	11	33	44	29	59	88

Speaking Criterion = 15 (average rating of C- on the rating scale)

	Form 3 Post Test			Form 4 Post Test			Total Sample Post Test		
	Below Standard	18 or above		Below Standard	18 or above		Below Standard	18 or above	
Pretest below standard	5	5	10	4	9	13	9	14	23
15 or above	3	31	34	1	30	31	4	61	65
	8	36	44	5	39	44	13	75	88

Endnotes

1. James W. Gibson, Charles R. Gruner, Michael S. Hanna, Mary-Jeanette Smythe, and Michael T. Hayes, "The Basic Course in Speech at U.S. Colleges and Universities - III," Communication Education, 29 (January 1980), 1-9.
2. Samuel Becker and Leah Ekdom, "That Forgotten Basic Skill," Association for Communication Administration Bulletin, no. 33 (1980), 12-25; Vincent DeSalvo, David C. Larson and William J. Seiler, "Communication Skills Needed by Persons in Business Organizations," Communication Education 25 (November 1976), 269-275; Kathleen M. Jamieson and Andrew D. Wolvin, "Non-Teaching Careers in Communication: Implications for the Speech Communication Curriculum," Communication Education 25 (November 1976), 283-291.
3. Gibson, 1-9; See also James Moffett, "Integrity in the Teaching of Writing," Phi Delta Kappan (December 1979), 277.
4. While some institutions may, in fact, use pre and posttests to measure gain in rhetorical skill, their results typically have major limitations: they are not published in referred journals and they are typically derived from in-house rating scales which do not allow us to make generalizations or compare data across institutions. Few researchers have attempted to explore the relationships between oral and written communication education. A thorough computer data search failed to locate any articles which met these criteria.
5. Vicki Spandel and Richard J. Stiggins, Direct Measure of Writing Skill: Issues and Answers (Portland, Oregon: Clearinghouse for Applied Performance Testing, 1980), pp. 2-4.

6. Richard J. Stiggins (ed), Perspectives on the Assessment of Speaking and Listening Skills (Portland, Oregon: Clearinghouse for Applied Performance Testing, 1981).
7. SCA Guidelines for Minimal Competence in Speaking and Listening for High School Graduates (Falls Church, Va.: Speech Communication Association, n.d.). A Brochure provided to every state Department of Public Instruction by the Speech Communication Association.
8. The SCA committee on Assessment in Higher Education is surveying college and university programs to determine the current status of assessment. The Stiggins text on assessment is primarily a report of the status quo with regard to speech assessment. Written communication education and assessment has clearly received more attention than speech from researchers in recent years.
9. Spandel and Stiggins, p. 2.
10. See the Speaking and Writing Assessment portion of the Composite Examination, College Outcome Measures Project, American College Testing Program, Iowa City, Iowa.
11. A. Forrest and J. Steele, Summary Report of Research and Development 1976-1981, College Outcome Measures Project, American College Testing Program, Iowa City, 1982.
12. Spandel and Stiggins, p. 7.
13. A more complete version of this study will appear in the April 1983 issue of Communication Education.